

Abstract

5 A quadrature overlapping modulation method for modulating and shaping a baseband data sequence which has a data bit rate of $1/T$. The method separates a baseband data sequence into an even bit data sequence to a first channel and an odd bit data sequence to a second channel, delaying by $\tau=T$ time even bit data sequence and
10 the odd bit data sequence relative to each other. After that, both the even bit data sequence and the odd bit data sequence are shaped in a waveform shaping filter. A carrier signal is generated and it modulates both the even bit data sequence and the odd bit data sequence.
15 The data sequences are shaped with a combination of a triangular function and a trigonometric function or with a convolution function of two trigonometric functions before carrier modulation.

